UNITED STATES DEPARTMENT OF COMMERCE United States Patent and Trademark Office Address: COMMISSIONER FOR PATENTS P.O. Rev. 1450

P O Box 1450 Alexandria, Virgima 22313-1450 www.uspto.gov

#### NOTICE OF ALLOWANCE AND FEE(S) DUE

22850 7590 01/04/2010

OBLON, SPIVAK, MCCLELLAND MAIER & NEUSTADT, L.L.P.

1940 DUKE STREET ALEXANDRIA, VA 22314 EXAMINER BHAT, ADITYA S

ART UNIT PAPER NUMBER

2863 DATE MAILED: 01/04/2010

 APPELCATION NO.
 FILING DATE
 FIRST NAMED INVENTOR
 ATTORNEY DOCKET NO.
 CONFRMATION NO.

 10/539,128
 02/05/2006
 Samuel Boutin
 2.739 12USZXPCT
 2712

TITLE OF INVENTION: METHOD FOR DIAGNOSIS OF FUNCTIONAL FAULTS IN A FUNCTIONAL ARCHITECTURE

APPLN. TYPE	SMALL ENTITY	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	NO	\$1510	\$300	\$0	\$1810	04/05/2010

THE APPLICATION IDENTIFIED ABOVE HAS BEEN EXAMINED AND IS ALLOWED FOR ISSUANCE AS A PATENT, PROSECUTION ON THE MERITS IS CLOSED. THIS NOTICE OF ALLOWANCE IS NOT A GRANT OF PATENT RIGHTS. THIS APPLICATION IS SUBJECT TO WITHDRAWAL FROM ISSUE AT THE INITIATIVE OF THE OFFICE OR UPON PETITION BY THE APPLICANT. SEE 37 CFR 1.313 AND MPEP 1308.

THE ISSUE FEE AND PUBLICATION FEE (IF REQUIRED) MUST BE PAID WITHIN THREE MONTHS FROM THE MAILING DATE OF THIS NOTICE OR THIS APPLICATION SHALL BE REGARDED AS ABANDONED. THIS STATUTORY PERIOD CANNOT BE EXTENDED. SEE 35 U.S.C. 151. THE ISSUE FEE DUE INDICATED ABOVE DOES NOT REFLECT A CREDIT FOR ANY PREVIOUSLY PAID ISSUE FEE IN THIS APPLICATION. IF AN ISSUE FEE HAS PREVIOUSLY BEEN PAID IN THIS APPLICATION (AS SHOWN ABOVE), THE RETURN OF PART B OF THIS FORM WILL BE CONSIDERED A REQUEST TO REAPPLY THE PREVIOUSLY PAID ISSUE FEE TOWARD THE ISSUE FEE NOW DUE.

#### HOW TO REPLY TO THIS NOTICE:

I. Review the SMALL ENTITY status shown above.

If the SMALL ENTITY is shown as YES, verify your current SMALL ENTITY status:

A. If the status is the same, pay the TOTAL FEE(S) DUE shown above.

B. If the status above is to be removed, check box 5b on Part B - Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and twice the amount of the ISSUE FEE shown above, or

If the SMALL ENTITY is shown as NO:

A. Pay TOTAL FEE(S) DUE shown above, or

B. If applicant claimed SMALL ENTITY status before, or is now claiming SMALL ENTITY status, check box 5a on Part B - Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and 1/2 the ISSUE FIEE shown above.

II. PART B - FEE(S) TRANSMITTAL, or its equivalent, must be completed and returned to the United States Patent and Trademark Office (USPTO) with your ISSUE FEE and PUBLICATION FEE (if required). If you are charging the fee(s) to your deposit account, section "4b" of Part B - Fee(s) Transmittal should be completed and an extra copy of the form should be submitted. If an equivalent of Part B is filed, a request to reapply a previously paid issue fee must be clearly made, and delays in processing may occur due to the difficulty in recognizing the paper as an equivalent of Part B.

III. All communications regarding this application must give the application number. Please direct all communications prior to issuance to Mail Stop ISSUE FEE unless advised to the contrary.

IMPORTANT REMINDER: Utility patents issuing on applications filed on or after Dec. 12, 1980 may require payment of maintenance fees. It is patentee's responsibility to ensure timely payment of maintenance fees when due.

#### PART B - FEE(S) TRANSMITTAL

# Complete and send this form, together with applicable fee(s), to: Mail Mail Stop ISSUE FEE Commissioner for Patents P.O. Box 1450 Alexandria, Virginia 22313-1450

or Fax (571)-273-2885

INSTRUCTIONS: This appropriate. All further indicated unless correcte maintenance fee notificat	form should be used to correspondence including d below or directed off tions.	or transmitting ig the Patent, ierwise in Bloo	the ISS dvance o k 1, by (	UE FEE and PUBLIC rders and notification a) specifying a new of	of n	ON FEE (if requinaintenance fees who pondence address;	red). B rill be i and/or	locks 1 through 5 st nailed to the current (b) indicating a sepa	tould be comp correspondence rate "FEE ADI	leted where address as DRESS" for
	ENCE ADDRESS (Note: Use Bi	ock 1 for any chang	of address)		Note Fee( pape have	: A certificate of a s) Transmittal. Things. Each additional atts own certificate	mailing s certifi l paper, of mai	can only be used fo cate cannot be used f such as an assignme ling or transmission.	domestic mai or any other ac or formal dra	lings of the companying twing, must
<sup>22850</sup> OBLON, SPIV 1940 DUKE STI ALEXANDRIA.	7590 01/04 FAK, MCCLELL/ REET , VA 22314		R & N							
									(De	positor's name)
					L					(Signature)
					$ldsymbol{ldsymbol{ldsymbol{ldsymbol{ldsymbol{ldsymbol{ldsymbol{ldsymbol{ldsymbol{ldsymbol{ldsymbol{ldsymbol{ldsymbol{ldsymbol{ldsymbol{ldsymbol{ldsymbol{ldsymbol{ldsymbol{ldsymbol{ldsymbol{ldsymbol{ldsymbol{ldsymbol{ldsymbol{ldsymbol{ldsymbol{ldsymbol{ldsymbol{ldsymbol{ldsymbol{ldsymbol{ldsymbol{ldsymbol{ldsymbol{ldsymbol{ldsymbol{ldsymbol{ldsymbol{ldsymbol{ldsymbol{ldsymbol{ldsymbol{ldsymbol{ldsymbol{ldsymbol{ldsymbol{ldsymbol{ldsymbol{ldsymbol{ldsymbol{ldsymbol{ldsymbol{ldsymbol{ldsymbol{ldsymbol{ldsymbol{ldsymbol{ldsymbol{ldsymbol{ldsymbol{ldsymbol{ldsymbol{ldsymbol{ldsymbol{ldsymbol{ldsymbol{ldsymbol{ldsymbol{ldsymbol{ldsymbol{ldsymbol{ldsymbol{ldsymbol{ldsymbol{ldsymbol{ldsymbol{ldsymbol{ldsymbol{ldsymbol{ldsymbol{ldsymbol{ldsymbol{ldsymbol{ldsymbol{ldsymbol{ldsymbol{ldsymbol{ldsymbol{ldsymbol{ldsymbol{ldsymbol{ldsymbol{ldsymbol{ldsymbol{ldsymbol{ldsymbol{ldsymbol{ldsymbol{le}}}}}}$					(Date)
APPLICATION NO.	FILING DATE			FIRST NAMED INVEN	TOR		ATTO	RNEY DOCKET NO.	CONFIRMAT	ION NO.
10/539,128	02/06/2006		Samuel Boutin		273912US2XPCT			2712		
TITLE OF INVENTION	: METHOD FOR DIAG	NOSIS OF FU	NCTION	AL FAULTS IN A FU	NCT					
APPLN. TYPE	SMALL ENTITY	ISSUE FEE	DUE	PUBLICATION FEE I	OUE	PREV. PAID ISSUE	FEE	TOTAL FEE(S) DUE	DATE	DUE
nonprovisional	NO	\$151	)	\$300		\$0	\$1810		04/05/	2010
EXAM	INER	ART UN	IIT	CLASS-SUBCLASS	S					
BHAT, Al		2863		702-183000						
"Fee Address" indi PTO/SB/47; Rev 03-0 Number is required.  3. ASSIGNEE NAME A	ondence address (or Cha 3/122) attached. ication (or "Fee Address 2 or more recent) attach ND RESIDENCE DAT. ess an assignce is ident h in 37 CFR 3.11. Comp	nge of Corresp  Indication for ed. Use of a C	ondence m ustomer TED ON	or agents OR, alter (2) the name of a registered attorney 2 registered patent listed, no name wi THE PATENT (print of	rnativ single y or a t attor ill be or typ the pa	e firm (having as a gent) and the name meys or agents. If a printed.  e)  tent. If an assigne- assignment.	members of up no nam	er a 2	cument has be	en filed for
Please check the appropri	iate assignee category or	categories (wi	l not be p	rinted on the patent):	۵	Individual 🚨 Co	rporati	on or other private gro	up entity 🗖 (	Government
4a. The following fee(s) a  Issue Fee Publication Fee (N Advance Order - #	o small entity discount j	permitted)	4	b. Payment of Fee(s):  A check is enclose Payment by credi The Director is he overpayment, to l	sed. it care ereby	i. Form PTO-2038	is atta	ched. equired fee(s), any de		dit any this form).
	s SMALL ENTITY state	is. See 37 CFR						TTY status. Sec 37 Cl		
NOTE: The Issue Fee and interest as shown by the r	d Publication Fee (if req records of the United Sta	uired) will not tes Patent and	e accepte Frademarl	ed from anyone other the k Office.	han th	ne applicant; a regis	stered a	ttorney or agent; or th	e assignee or of	her party in
Authorized Signature						Date				
Typed or printed name				Registration No.						
This collection of informan application. Confident submitting the completed this form and/or suggestit Box 1450, Alexandria, V Alexandria, Virginia 223	ation is required by 37 C tiality is governed by 35 I application form to the ons for reducing this bu irginia 22313-1450. DC 13-1450.	FR 1.311. The U.S.C. 122 an USPTO. Time rden, should be O NOT SEND I	informati d 37 CFR will vary sent to th EES OR	on is required to obtain  1.14. This collection is depending upon the Chief Information C COMPLETED FORM	n or n is esti indiv Office IS TO	etain a benefit by the imated to take 12 n idual case. Any co r, U.S. Patent and THIS ADDRESS	he publ ninutes mment: Tradem	ic which is to file (and to complete, includin s on the amount of tir ark Office, U.S. Depo O TO: Commissioner	by the USPTC g gathering, pro- ne you require rtment of Com- for Patents, P.O.	to process) paring, and to complete merce, P.O. Box 1450,

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.



## UNITED STATES PATENT AND TRADEMARK OFFICE

#### UNITED STATES DEPARTMENT OF COMMERCE United States Patent and Trademark Office Address: COMMISSIONER FOR PATENTS

P O Box 1450 Alexandra, Virgima 22313-1450 www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.	
10/539,128	02/06/2006	Samuel Boutin	273912US2XPCT	2712	
22850	7590 01/04/2010	EXAMINER			
OBLON, SPIVA	AK, MCCLELLAND	BHAT, ADITYA S			
1940 DUKE STR		ART UNIT	PAPER NUMBER		
ALEXANDRIA,	VA 22314		2863		
		DATE MAILED: 01/04/2010			

## Determination of Patent Term Adjustment under 35 U.S.C. 154 (b)

(application filed on or after May 29, 2000)

The Patent Term Adjustment to date is 153 day(s). If the issue fee is paid on the date that is three months after the mailing date of this notice and the patent issues on the Tuesday before the date that is 28 weeks (six and a half months) after the mailing date of this notice, the Patent Term Adjustment will be 153 day(s).

If a Continued Prosecution Application (CPA) was filed in the above-identified application, the filing date that determines Patent Term Adjustment is the filing date of the most recent CPA.

Applicant will be able to obtain more detailed information by accessing the Patent Application Information Retrieval (PAIR) WEB site (http://pair.uspto.gov).

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Customer Service Center of the Office of Patent Publication at 1-(888)-786-0101 or (571)-272-4200.

## Application No. Applicant(s) 10/539,128 BOUTIN, SAMUEL Notice of Allowability Examiner Art Unit ADITYA RHAT 2863 -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS. This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308. This communication is responsive to 11/5/09. The allowed claim(s) is/are 12-25,30 and 31. 3. Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f). b) ☐ Some\* c) ☐ None of the: a) 🔯 All 1. A Certified copies of the priority documents have been received. 2. Certified copies of the priority documents have been received in Application No. 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)). \* Certified copies not received: \_\_\_\_\_. Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application. THIS THREE-MONTH PERIOD IS NOT EXTENDABLE. 4. A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient. CORRECTED DRAWINGS (as "replacement sheets") must be submitted. (a) Including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached 1) hereto or 2) to Paper No./Mail Date (b) including changes required by the attached Examiner's Amendment / Comment or in the Office action of Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d). 6. DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL. Attachment(s) 1. | Notice of References Cited (PTO-892) 5. Notice of Informal Patent Application 2. Notice of Draftperson's Patent Drawing Review (PTO-948) Interview Summary (PTO-413), Paper No./Mail Date Information Disclosure Statements (PTO/SB/08). 7. Examiner's Amendment/Comment Paper No./Mail Date 4. T Examiner's Comment Regarding Requirement for Deposit 8. X Examiner's Statement of Reasons for Allowance of Biological Material 9. ☐ Other .

Primary Examiner, Art Unit 2863

/Aditva Bhat/

Application/Control Number: 10/539,128 Page 2

Art Unit: 2863

#### DETAILED ACTION

#### Status

1. Claims 12-25 and 30-31 are currently pending in this application.

### Priority

Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which
papers have been placed of record in the file.

### Information Disclosure Statement

No information disclosure statement (IDS) was submitted with the response submitted on 12/4/2009.

## Drawings

4. The drawings submitted on 2/6/2006 are in compliance with 37 CFR § 1.81 and 37 CFR § 1.83 and have been accepted by the examiner.

## Allowable Subject Matter

5. The following is a statement of reasons for the indication of allowable subject matter:

Regarding claims 12-25 and 30-31:

The primary reason for the allowance of claim 12 is the inclusion of the method steps of: determining and listing a second plurality of particular values corresponding to functional states for said hardware components relative to a propagation of signals through said hardware architecture thereby indicating a state of propagation of information relating to said faults across the functional architecture; It is this/these features found in the claim(s), as they are claimed in the combination that has not been

Application/Control Number: 10/539,128

Art Unit: 2863

12

found, taught or suggested by the prior art of record, which makes this/these claim(s) allowable over the prior art.

The primary reason for the allowance of claim 21 is the inclusion of the method steps of: creating a second list of particular values corresponding to functional states for said hardware components relative to a propagation of signals through said hardware architecture thereby indicating a state of propagation of information relating to said functional faults of said sensors and actuators across the functional architecture; It is this/these features found in the claim(s), as they are claimed in the combination that has not been found, taught or suggested by the prior art of record, which makes this/these claim(s) allowable over the prior art.

Claims 13-20, 22, 24-25 and 30-31 are allowed due to their dependency on claim

Claim 23 is allowed due to its dependency on claim 21.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

#### Conclusion

 Any inquiry concerning this communication or earlier communications from the examiner should be directed to ADITYA S. BHAT whose telephone number is (571)272-2270. The examiner can normally be reached on M-F 9-5:30. Application/Control Number: 10/539,128 Page 4

Art Unit: 2863

7. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Drew Dunn can be reached on 571-272-2312. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

8. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Aditya Bhat/ Primary Examiner, Art Unit 2863 December 21, 2009